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Authentic Tasks for Revision

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Abstract

In this case study, the use of an authentic task for revision of a Masters-level Information Technology course, Multimedia Systems, is described and evaluated. Authentic tasks are designed to mirror problems as they are encountered in the real world, with often ill-defined or even conflicting requirements, and limited time and resources available to develop a solution. While authentic tasks are increasingly used in higher education for the purposes of assessment, the scenario described here highlights the applicability of such an approach to revision.

Keywords

authentic tasks, revision, peer learning, problem-based learning, employability

What is an authentic task?

An authentic task, whether it is employed as a means of assessment or revision, might be defined as one which comprises ‘challenges and roles that help students rehearse for the complex ambiguities of the ‘game’ of adult and professional life’, requiring the students to ‘be effective performers with acquired knowledge’ (Wiggins, 1990). Wiggins, while focussing on authentic tasks for assessment rather than revision, also stresses that the task should simulate real-world tests of ability. Furthermore, Brown *et al.* (1989) state that authentic tasks are ‘most simply defined as the ordinary practices of the culture [of a given domain]’. In the scenario described here, the domain, or real-world environment the task was intended to emulate, was that of a web development company or design agency.

Background

In this small pilot study, the use of authentic tasks for revision purposes was investigated, within the context of the Multimedia Systems module that forms part of a larger MSc IT course. The module comprises both taught theory and practical, lab-based exercises and is assessed by means of a series of weekly practical submissions, culminating in a larger final project and report, and an exam. Recent efforts to make the practical labs more ‘authentic’ in terms of the technology employed have seen exercises based on the worthy but little-used SMIL replaced by additional work with Flash, then HTML5, for example. These modifications have resulted in positive feedback from students, who prefer to work with tools they expect to find in the workplace or already experience in their day-to-day web browsing. While the teaching of the module moves towards an increasingly authentic approach, there exists significant literature on the subject of authentic assessment, including Wiggins (1990), Herrington & Herrington (2004) and Stein, Isaacs & Andrews (2004). Inspired by these accounts, the module within which this pilot was carried out provided an opportunity for assessing the effectiveness of authentic revision of key concepts and skills.

Overview

During a two-hour revision lab session, an authentic scenario was presented to the students wherein they were to assume the role of a web development company bidding for work on a multimedia-rich website. The students were divided into two smaller groups to introduce a competitive element and to better facilitate group discussion. The scenario itself was adapted from a previous exam question, with the intention of ‘selling’ the exercise to the students as a worthwhile endeavour that was relevant to their own revision. The scenario was deliberately vague from a technical perspective, in an effort to mirror real-world conditions where clients may have ill-considered or even conflicting ideas about their requirements (Wiggins, 1990). The groups were asked to report back at the end of the lab with the approach they would take to the work, and were encouraged to consult their lecture and lab notes where appropriate. In their presentations, they were asked to consider a range of topics associated with software development (taught over the course of the module), from requirements analysis to testing and evaluation.

References

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Data Collection

Questionnaire

	Strongly Agree	Agree	Disagree	Strongly Disagree
1. Today's lab improved my understanding of the module	4	3	2	1
2. Today's lab will help me pass the module exam	4	3	2	1
3. Today's lab has equipped me for future employment	4	3	2	1
4. I gained considerable new knowledge from today's lab	4	3	2	1
5. Today's lab was enjoyable	4	3	2	1
6. Today's lab was useful	4	3	2	1
7. My revision has been well supported across the IT course	4	3	2	1
8. I have found labs useful across the IT course	4	3	2	1
What subject did you study for your undergraduate degree?				
Have you worked in a full-time job since your first degree?	Yes	No		
Are you male or female?	Male	Female		

Results

The table below summarises the responses collected from students by means of the questionnaire. Columns A-H represent the anonymous respondents, while rows 1-8 correspond to the questions posed. Questions 1-6 relate directly to the authentic revision exercise, while questions 7 and 8 refer to the MSc IT programme as a whole. In all cases, responses were elicited on a four-point Likert scale, from ‘Strongly Agree’ to ‘Strongly Disagree’, with a numerical value 4 to 1 assigned to each point on the scale. All questions were positively phrased, meaning that a higher numerical value equated to a more positive response, e.g. a value of 4 for question 6, ‘Today’s lab was useful’, means the respondent strongly agrees with the statement.

	A	B	C	D	E	F	G	H	Average
1	4	3	4	4	4	4	3	4	3.75
2	4	3	3	3	3	4	2	4	3.25
3	4	3	3	4	3	4	3	4	3.50
4	4	3	3		4	3	3	4	3.43*
5	4	3	4	4	4	4	4	4	3.88
6	4	4	4	4	4	4	4	4	4.00
7	4	4	2		4	4	3	4	3.57*
8	4	4	4	4	4	4	4	4	4.00

* Based on 7 responses received

Discussion

The students took to the task with some relish and were able to produce presentations of surprisingly high calibre, given the limited time available. Only eight students participated in the exercise, which renders the questionnaire data less significant than is ideal, but the formal feedback received was overwhelmingly positive, with all respondents strongly agreeing with the statement ‘Today’s lab was useful’. This response was also borne out in the comments section of the questionnaire, where a typical response was ‘gave a better understanding of design methodology and group work always contributes to better knowledge’.

One student volunteered to be interviewed about their experience. The interview was structured loosely around the same questions posed in the questionnaire, with the intention of providing a means of comparing responses immediately following the exercise with those gathered after a period of reflection. Overall, the responses were still positive, if more qualified: when asked if the exercise had been useful, the interviewee noticeably hesitated before replying ‘yes’. The interviewee felt that the structure and purpose of the exercise was unclear at the start of the session (an intended feature of the authentic task). However, the interviewee felt that she gained useful insight from the group discussion that took place around the presentations. This observation echoes Damon’s (1984), description of peer learning: ‘collaborative learning experiences are ones in which participants discover solutions and create knowledge together’.

Outcomes

As a result of this work, an authentic revision task will be incorporated into subsequent modules, following positive feedback and excellent engagement by this year’s cohort. This small-scale study represents a first attempt at incorporating revision-focussed authentic tasks into courses: it is hoped that larger-scale trials will be possible in the future, over a range of different cohorts.

If properly designed, such tasks have the potential to touch upon a wide range of the topics covered during the module, and provide an excellent opportunity for the students to learn from their peers – as well as their tutors – and gain valuable experience in an environment that mimics that with which they will soon be faced, following graduation.